

**CLAIMS:**

1. A programmer for a medical device comprising an internal antenna mounted within a programmer housing, and a display mounted within the programmer housing.
2. The programmer of claim 1, further comprising:  
a first circuit board within the programmer housing, the first circuit board including telemetry circuitry, wherein the telemetry circuit is coupled to the internal antenna; and  
a second circuit board within the programmer housing, the second circuit board including the display and display circuitry.
3. The programmer of claim 2, wherein the second circuit board includes control circuitry to control the display and the telemetry circuit, the programmer further comprising an electrical interface between the first and second circuit boards.
4. The programmer of claim 2, wherein the control circuitry disables the display and the display circuitry during telemetry.
5. The programmer of claim 2, wherein the internal antenna is mounted to the first circuit board on a side of the first circuit board opposite the second circuit board.
6. The programmer of claim 2, wherein the internal antenna defines an aperture, the programmer further comprising a battery bay extending at least partially into the aperture.
7. The programmer of claim 2, wherein the first circuit board and the second circuit board are substantially enclosed by a first housing member and a second housing member.
8. The programmer of claim 7, wherein the first housing member includes a molded area that defines a battery bay adjacent the first circuit board.

9. The programmer of claim 8, further comprising an access opening in the first housing member to gain access to the battery bay for placement of batteries.

10. The programmer of claim 2, wherein the internal antenna, the first and second circuit boards, and the display are assembled in a stacked configuration.

11. The programmer of claim 2, further comprising an external antenna coupled to the telemetry circuitry via a cable.

12. The programmer of claim 11, wherein the external antenna defines an aperture with a channel formed to hold a portion of an item of clothing associated with a patient and thereby hold the external antenna in a substantially fixed position relative to an implantable neurostimulator.

13. The programmer of claim 2, wherein the display is mounted to the second circuit board on a side of the second circuit board opposite the first circuit board.

14. The programmer of claim 1, wherein the display is a liquid crystal display.

15. The programmer of claim 1, wherein the display presents status information for the programmer.

16. The programmer of claim 1, wherein the display presents status information for the medical device.

17. The programmer of claim 1, further comprising telemetry circuitry to transmit signals to the medical device via the antenna and process signals received from the medical device via the antenna.

18. The programmer of claim 1, further comprising a loading port to load instructions into memory in the programmer.

19. A method comprising:  
communicating with a medical device via an antenna and telemetry circuitry mounted internally within a medical device programmer; and  
presenting information on a display mounted internally within the medical device programmer.

20. The method of claim 19, further comprising disabling the display and display circuitry during telemetry.

21. The method of claim 20, further comprising communicating with the medical device via an external antenna coupled to the telemetry circuitry via a cable.